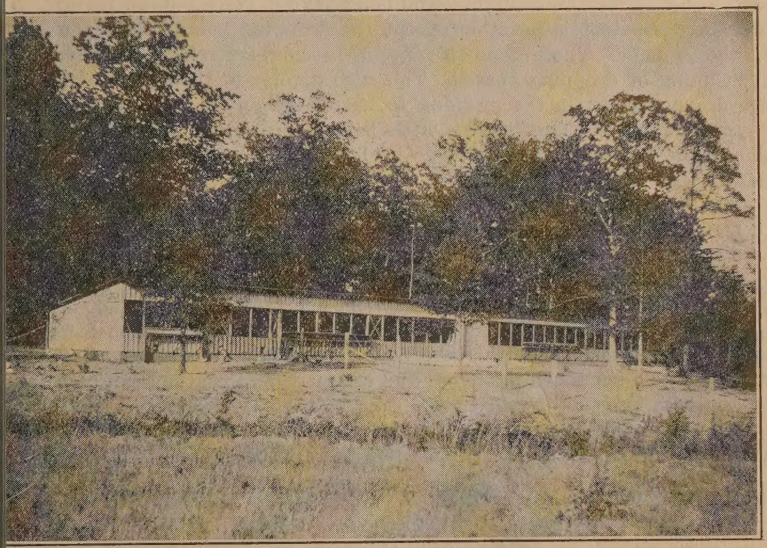
North Carolina Poultry Houses



A WELL LOCATED NORTH CAROLINA COMMERCIAL HOUSE NEAR RALEIGH CCOMMODATING 1,000 LAYING HENS. NOTE SHADE IN REAR AND OPEN ANGE IN FRONT. THIS FLOCK PAYS A PROFIT.

NORTH CAROLINA
STATE COLLEGE OF AGRICULTURE AND ENGINEERING
AND
U. S. DEPARTMENT OF AGRICULTURE, CO-OPERATING
N. C. AGRICULTURAL EXTENSION SERVICE
I. O. SCHAUB, DIRECTOR
STATE COLLEGE STATION
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NORTH CAROLINA POULTRY HOUSES

By A. G. Oliver, H. H. Gordon, C. F. Parrish and B. F. Kaupp

COMMERCIAL POULTRY HOUSE
(Plan No. 127)

(Designed by Allen G. Oliver)

In planning this poultry house the interior equipment has been arranged with a special view to sanitation and labor-saving, two essential factors. All interior equipment is portable except the dropping boards and even these can be so made. There is no stooping in feeding, watering, gathering eggs or cleaning of dropping boards. This also applies to the wire frames that are dropped down in the morning to keep hens on floor during the work day and raised in the evening a little before roosting time when gathering the last lay of eggs. This is done by lowering or raising with cords similar to that of porch screen.

The keeping of the hens from the dropping boards is most essential to sanitation and means clean perches, clean nests, clean eggs, and more sanitary litter which will not have to be renewed so often. It also means cleaner feeding for the fowls as all scratch grains are to be fed in this litter. This litter should be not less than one foot deep.

If constructed according to detail one has a house in which sanitation is emphasized and in which there may be absolute control of mites. The roost poles do not touch the house and are made so that they can be treated on top with lice paints and turned over.

Water troughs are arranged to have sanitary drinking water. These are easily cleaned from the outside and there is no dampness in the house.

BILL OF MATERIALS FOR 20′x24′ COMMERCIAL HOUSE ACCOMMODATING 130 TO 150 HENS

(Plan No. 127)

Sills ..... 8 pieces 2″x6″x12′
Studs ..... 12 pieces 4″x4″x10′
Studs ..... 30 pieces 2″x4″x12′
Purlins ..... 4 pieces 2″x6″x12′
Purlins ..... 12 pieces 2″x4″x12′
Plate ..... 7 pieces 2″x4″x12′
Rafter ..... 30 pieces 2″x6″x12′

Nests and Mash Hopper

10 pieces 1″ x 4″ x 16′ dressed
5 pieces 1″ x 3″ x 16′ dressed
2 pieces 1″ x 6″ x 16′ dressed
2 pieces 1″ x 8″ x 16′ dressed
5 pieces 1″ x12″ x 16′ dressed

1:3:5 concrete foundations—
14 sacks cement; 3 yds. gravel, 1½ yds. sand.
15 cu. yds. cinders or rocks for under drainage.

1:2:4 concrete floor—
24 sacks cement, 4 yds. gravel, 2 yds. sand.

Sheathing, 718 bd. ft. T. & G. roofers 1″x8″x14′.

Weather boarding, 672 bd. ft., 1″x6″x12′.

Roost poles, 8 pieces 2″x3″x16′ dressed.

Roost poles, 3 pieces 2″x4″x14′ dressed.

Drop board, 190 bd. ft. Roofers, 1″x8″x14′.

Drop board, 4 pieces 2″x4″x16′.

Poultry wire, 1″ mesh 5′x50′ and 3′x24′.

Bolts, 14 ½″x14″; pipe, 3 pcs. ½″x12″.

Hinges, 1 pr. 6″ strap; 4 pr. 4″ strap.

pcs. ⅜"x4'x6". Iron rods for roost supports; 3 prs. hook and eye hinges; 6 rolls three-ply roofing. Windows, 3 single sash, 6-light 22"x22"; 2 double sash, 18-light 30"x50". If vertical siding is used: Siding, 40 pcs. 1"x12"x10'; 24 pcs. 1"x12"x12'; batten, 40 pcs. 1"x3"-x10'; 10 pcs. 1"x3"x12'.
Total board feet lumber 2,961.

Increase length of building for greater numbers as follows: 260 hens, 0'x48'; 400 hens, 20'x72'; 520 hens, 20'x96'; 1,000 hens, 20'x182' will allow 0'x20' feed room between the two wings. Bill of material to be increased ccordingly.

BILL OF MATERIAL FOR COLONY HOUSE FOR 50 HENS

(Plan No. 18)

ills	4 pieces 2" x 6" x 16'	Rafters	10 pieces 2"x6"x16'
tuds	14 pieces 2" x 4" x 14'	Purlins	5 pieces 2"x4"x16'
tuds	3 pieces 4" x 4" x 14'	Plate	3 pieces 2"x4"x16'
iding	30 pieces 1" x12" x 12'	Roosts	6 pieces 2"x3"x10'
attens	30 pieces 1" x 3" x 12'	Roosts, 100 bd. ft.	
heathing, 350 bd. ft.		Roofers 1"x8"x12' and 14'	
2½:5 concrete		1" mesh wire 4'x16'; 3'x8'	
) sacks cement, 1 cu. yd. sand		12 ½"x14" bolts	
cu. yds. gravel		1 pr. 6" strap hinges	
rolls 3-ply roofing		1 pr. 4" strap hinges	
pairs hook and eye hinges		4 pieces ⅜"x3' rods	
otal bd. ft. lumber, 1,426			

The spaces from plate to roof between rafters at the rear are closed by ovable boards for summer ventilation. Nests for the smaller breeds, ich as Leghorns, may be made 12"x12"x12". If desired 4"x6" sills on ers may be substituted for concrete foundation and sill shown and 12" ase board used all around at the ground, but concrete is best.

Use 4" to 6" of cinders, gravel or sand on the floor.

ONSTRUCTION NOTES FOR COMMERCIAL AND COLONY HOUSES

(Plans Nos. 127 and 18)

The building should be set on concrete foundation, walls 6 ins. thick, xtending into the ground 12 ins., or to solid foundation, and 12 ins. above round. The base is to be spread to 12 ins. wide as shown on plan to in-ure sound footing. This wall is made of 1 part Portland cement, 3 parts good clean, sharp sand, free from silt or vegetable matter, and 5 parts crushed stone or gravel. The sand should be screened through a ¼-inch esh screen. Good, clean water should be used and the concrete thoroughly ixed, using enough water to give it a quaking, jelly-like consistency.

In most soils a trench will be sufficient for the part of the wall under-round, using 12-in. boards for forms above ground. Imbed foundation olts in each corner and 6 ft. apart on all sides. These bolts should ex-end 3 ins. above concrete to fasten sills to foundation.

To square foundation lay off a line along one side of building. Measure ong this line for 6 ft. Then at right angles to this line measure off 8 ft., aking these points so the distance from 6 ft. mark to 8 ft. mark on re-pective sides is exactly 10 ft. This will give a square corner and similar perations at each corner will give a square building.

When the foundation has been poured and set, bolt a 2"x6" sill on founda-on wall. Set up 4"x4" corner posts, plumb with level and brace securely,

toenailing posts to sill. Put in 2″x4″ studs, toenailing to sill and spacing two ft. on centers unless vertical siding is to be used, in which case they are spaced 4 ft., plumb and brace until siding is nailed on. Use 4″x4″ studs in front spacing, 4 ft. on center. Spike a single 2″x4″ plate to studs in rear and a double 2″x4″ plate in front.

Place 2″x4″ purlin between studs in front and back 2 ft. above sill. Notch out three studs in rear so the single sash windows which go in rear of house below drop board can slide sideways to admit light and allow ventilation in summer. Screen these openings with ¼-in. mesh wire to exclude rats and weasils when windows are open.

Drop down 3 ft. from top of plate in front and put in another purlin between posts, placing 2″x4″ studs between as shown in plan. The 5 ft. opening that is left is to be covered with 1-in. mesh poultry wire.

Cut 2″x6″ rafters, allowing for 15-in. eave in front and 12-in. in rear. Do not notch rafters, but spike to plates as shown. The spaces from plate to roof between rafters in back are then closed by hinged boards, which may be opened in summer for ventilation.

Put in side stubs, leaving proper sized openings for door and windows as shown on plan, again dropping in 2″x4″ purlin between studs 2 ft. above sill.

Make center purlin of two 2″x6″, spacing 4″x4″ posts 8 ft. on center as shown in plan to support rafters in center and form supports for nests and mash hoppers.

Nail on weatherboarding and roof sheathing, leaving proper openings for door, windows and outlets for hens. The latter should be 12″x14″ and closed by vertical sliding doors. Set windows and hang doors and put on roofing.

Supports and framework are now made for drop board. The drop board is made 3 ft. above floor line; 2″x4″ supports 8 ft. on center are used in front, to which cross pieces of 2″x4″ are nailed, resting on purlin in rear. The drop board of dressed tongue and grooved roofers is then cut, fitted, and nailed on this framework.

A hole 12″x18″ is cut in the center of the dropping board. Under same nail strips to form runners to support trough which is pushed in through a hinged door in back. Droppings are raked from each side through trap door in dropping board into trough. Trough is then pulled out from rear of house. One trough is all that is needed, no matter how long or how many houses are used, it fitting all openings.

Roost poles are now made. Six supports of 2″x4″ are cut 6 ft. long. In one end is screwed the hook of a hook and eye hinge, made of ½ inch iron, the eye being screwed into a stud in the rear of the house 8 ins. above the drop board. In the front end is driven a spike to which the iron rods which support the front end are fastened. These iron rods are set at an angle and fastened to a rafter above, being made long enough to allow roost poles to hang level, 8 ins. above drop board. Spikes are driven through these supports 14 ins. apart as shown on plan, extending through enough to hold roost pole. Roost poles are made of 2″x3″ with edges rounded off and the 3″ side up, thus making roost poles same on both sides. Holes are bored through supports and are removable for cleaning. Rods and hook and eye hinges should have oily rags fastened around them to prevent lice

nd mites getting on roost poles. Roost poles are so arranged that same an be oiled, greased, or painted on top side with lice paint and turned ver each two weeks. This places the treated side of roost pole down, not oiling the birds.

An opening is left between two posts in front for access to watering rough which is set on outside and reached from inside through cracks nade by 1″x2″ strips or heavy wire spaced 2 ins. apart. Supports for rough and platform are nailed to studs 3 ft. above floor line, extending n outside enough to hold trough and on inside for platform on which hickens stand to drink. Trough may be made of wood, lined with tin, or metal gutter pipe makes an excellent trough.

Supports for mash hopper and platform on which hens stand while ating are nailed to posts and studs 3 ft. above floor line. Strips 1″x4″ re nailed on for platform and the front one notched into the support to llow mash hopper to slide out freely. Mash hopper is made of 1″x5″ trips with a bottom 8 ins. wide.

The nest supports are nailed on 8 ins. above mash hopper supports, eaving just room enough for hens to eat from mash hopper freely, yet prevent their getting into it or scratching out feed. The shallow feed hop- pers with one inch mesh hardware cloth cut slightly smaller than inside limensions of feed hoppers, should be dropped in on top of feed. Fowls annot waste any feed by this method.

Nest boxes are made in three sections to fit between posts. They should pe 12″x12″ for small breeds, 14″x14″ for larger breeds. Division boards spaced 12 or 14 ins. apart, a 9-in. opening is left in back through which hens enter to lay, with a 6-in. hinged door in front through which eggs may be collected without going around. A light framework covered with poultry wire and hinged top should be used to close roosts during the day. To prevent roosting on nests use one-inch mesh wire as shown in plan.

A concrete floor is to be preferred although in some instances a dirt floor will suffice. The floor should be raised somewhat, whether dirt or concrete, to insure dryness and good drainage, concrete floor must have 8-in. of crushed rock or cinders thoroughly tamped for under-drainage, on top of which is placed the concrete floor. This floor should be 3 ins. thick, using a 1 part cement, 2 parts sand, 4 parts gravel or stone mixture and tamping thoroughly.

Dressed lumber is much to be preferred, giving fewer places to harbor lice and mites and taking paint more readily.

The house should be painted with two coats of some good paint, or at least whitewashed. A good whitewash can be made as follows: (1) Slake one bushel of quicklime in 12 gallons of hot water; (2) Dissolve two pounds of common salt and one pound of sulphate of zinc in two gallons of boiling water. Pour (2) into (1). Then after cooling add two gallons of skim milk and mix thoroughly. Spread lightly over surface with broad brush.

All studding used in front or ends is to be put in with the 2″ face up to prevent birds roosting on same, thus having the 4″ side to nail to.

Construction notes for 50-hen house will be practically the same and separate notes are hardly necessary.

Note: If house is floored with lumber, sills are to be dropped down on line of concrete floor as shown in drawing.

BILL OF MATERIAL FOR BROODER HOUSE—250-CHICK CAPACITY
(Plan No. 63)

Sills, 2 pieces 4″x6″x12′
Sills, 2 pieces 4″x6″x10′
Runners (if used), 3 pieces 4″x8″x12′
Plate, 2 pieces 2″x4″x12′
Sheathing, 210 bd. ft.
Studs ..... 10 pieces 2″x4″x12′
Purlins ..... 6 pieces 2″x4″x12′
Rafters ..... 8 pieces 2″x4″x12′
Battens ..... 26 pieces 1″x3″x14′
Roofers ... 30 pcs. 1″x6″x14′ T. & G.
Prepared roofing, 2 rolls
Hinges, 1 pair 8″ strap, 2 pair 4 strap.
Wire nails, 4 lbs. 20 d., 8 lbs. 12 d. 6 lbs. 10 d., 10 lbs. 8 d., 6 lbs. 6 d
Wire for windows, ½″ mesh 30″x5
Windows, 2 double sash 18-ligh 2′x4′ 6″ over all.
Windows, 2 single sash 9-ligh 2′x27″.
961 bd. feet lumber, not including posts and flooring.

Bill of material does not include joists or flooring if used instead of concrete floor to make house portable.

Construction Notes

The 250-chick brooder house, which is designed for eastern Piedmont and Coastal Plains sections, may be set on 4″x8″ runners so that it may be moved from one place to another whenever it is desirable to do so. Construction is the same in either case, except foundations are replaced by three 4″x8″ runners extending out 8 ins. for fastening eye bolts to be used in moving.

Use 4″x6″ sills, notch, fit together and square at corners as shown in plan. On the inside at bottom nail a 2″x3″ across sides for joist support, cut and notch 2″x6″ joists and space 2′ on center as shown.

Set up corner posts and studs, toenailing securely to sills, plumb and brace securely. Space studs 2′ on center. Spike on 2″x4″ plate front and rear. Cut and nail on rafters, spacing 2 ft. Do not notch rafters, but spike securely to plate. The spaces from roof to plate between rafters are to be closed by hinged boards which may be opened for ventilation when desired.

Put in one purlin along sides one foot above sill, a second one 27 ins. above the first as shown. Put in purlin half the height of studs front and rear, blocking in openings for windows and doors as shown. All studding used in front or ends is to be put in with the 2″ face up to prevent birds roosting on same, thus having the 4″ side to nail to.

Vertical siding will give a tighter, cheaper house and a stronger one. If horizontal siding is used space studs 2′ on center. Nail on siding and battens, sheath roof and lay roofing. Lay tongue and grooved floor, being careful to get it tight at all corners and studs to prevent drafts. Make and hang door and set in windows, hinging windows as shown on plan, so they will open to the inside and drafts cannot strike baby chicks. Cut 12″x14″ outlets and fix vertical sliding doors. Paint or whitewash.

This brooder house may be converted into a poultry house for the grown chicks by putting in temporary roost poles and dropping board.

The tongue and groove floor or double floor with paper between is recommended, covered with a layer of clean sand. But if dirt floor is used raise 4 to 6 inches with cinders or sand to insure dryness.

BILL OF MATERIAL FOR BROODER HOUSE FOR 500-CHICK CAPACITY

(Plan No. 62)

lls, 2 pcs. 2″x4″x16′; 4 pcs. 2″x-4″x12′
uds, 20 pcs. 2″x4″x10′; 12 pcs. 2″x4″x16′
ate, 2 pcs. 2″x4″x16′; 4 pcs. 2″x-4″x12′
ıfters, 16 pcs. 2″x6″x20′
eatherboards, 670 sq. ft., ⅝″x-6¾″x16′
eathing, 475 sq. ft. 1″x6″x16′
iling, 1,230 sq. ft. ⅝″x5¾″x16′
oor and window facing: 8 pcs. 1″x6″x14′
Bolts, 14 ½″x12″
Roofing, 5 rolls or squares
Roll ¼″ mesh wire 30″x30′
Foundation, 1:3:5 concrete (2 yds.) 9 sks. cement, 1 yd. sand, 2 yds. gravel.
Concrete floor, 2½″, 1:3:5 with ½″ 1:2. 10 sks. cement, 1½ yds. sand, 2½ yds. gravel, 5 cu. yds. of cinders or gravel for sub floor.
Hinges, 3 prs. 6″ strap, 1 pr. 2½″ butt., 3,096 ft. lumber, 10 percent waste in framing, 20 percent on other.

Construction Notes

This brooder house, which is for western Piedmont and mountain sections, is not portable, being too large to put on skids as is the case in brooder house No. 63. Concrete wall with bolts imbeded in same is made exactly as described for poultry house No. 127. General construction is the same as that of brooder house No. 63 as far as framing is concerned. It can be planked up and down and cracks battened or weatherboarded. In either case it is to be sealed throughout, giving a 4″ dead air space necessary for cold climates.

Concrete floor is the same as described in blueprint. Board floor can be used if desired.

BILL OF MATERIAL FOR INCUBATOR AND FEED HOUSE

(Plan No. 68)

lls, 2 pcs. 2″x8″x16′; 4 pcs. 2″-x8″x10′
sts, 1 pc. 6″x6″x10′
ists, 10 pcs. 2″x10″x12′; 10 pcs. 2″x10″x10′
rder, 1 pc. 6″x10″x16′ or 3 pcs. 2″x10″x16′
uds, 4 pcs. 4″x4″x10′; 44 pcs. 2″-x4″x10′
ate, 10 pcs. 2″x4″x12′; 10 pcs. 2″-x4″x10′
rlin, 8 pcs. 2″x4″x10′
fters, 26 pcs. 2″x4″x12′; 6 pcs. 2″x4″x10′
airs, 2 pcs. 2″x10″x14′; 8 pcs. 1″-x8″x12′
idging, 12 pcs. 1″x2″x12′
per joists, 14 pcs. 2″x4″x16′
eathing, 100 pcs. 1″x6″x12′ sized
eatherboarding, 1,056 bd. ft. lumber.
Ceiling, 1,250 bd. ft. ¾″x3½″x10′
Flooring, 390 bd. ft. 1″ T. & G. 12′ long.
Door facing and frames, 8 pcs. 1″-x6″x10′
Window facing, 4 pcs. 1″x6″x10′
Bolts, 12 ½″x12″
Windows, 4 12-light 2½′x5′; 6 6-light single sash 1′x2′ basement light.
Door, 2 3′x7′
Drain, 1 4″ bell for floor
12′ 4″ terra cotta pipe
1 4″ ell
Foundation and wall 1:3:5 concrete, 61 sks. cement, 6½ yds. sand, 12 yds. gravel.
Floor, 4″ thick base 1:3:5, 1:2¾″ surface, 17 sks. cement, 2 yds. sand, 3½ yds. gravel.
Total bd. feet lumber, 5,110.

Construction Notes

Dig basement exactly 16′x20′ and 5 ft. 6 ins. deep, being careful to cut walls so they will act as outside forms for concrete. Cut back under bank for extra wide footing as shown. Inside forms for 8 in. concrete wall, using tongue and groove material for smooth wall finish if possible.

Use 1:3:5 mixture of concrete, tamp well and trowel well next to form to insure smooth finish. Set bolts for sill as shown and forms for windows.

The drain tile under wall should be placed before concrete is poured and later connected inside and out.

Pour concrete floor either before rest of building is erected or after, whichever is preferred or most convenient. Pour 4″ floor, using 1:2:4 mix and tamping thoroughly, first placing drain tile and outlet as shown. Slope floor to this center drain, giving 1″ slope in 10 ft.

Bolt 2″x8″ sill to foundation. Put in 2″x10″ joists, using 3 sets of 1″x2″ bridging as shown.

Set corner posts and studs spacing as shown. Toenail to sill, plumb and brace securely. Spike 2″x4″ plate to studs. Drop in purlins as shown, block in windows and doors. Nail in 2″x4″ ceiling joists 2′ on center.

Lay out rafters, giving ⅓ pitch to roof, 18 in. eaves, making pattern and cutting all by it. Set up rafters, using 2″x4″ collar beam, put in end studs, weatherboard sides and sheath and lay roof. Face doors and windows, hang doors and set windows. Paint. Lay floor, build stairs, bins and basement partition as shown.